

**What is claimed is:**

1           1.    A driving circuit for driving a load according  
2           to an AC current of an alternating current (AC) device,  
3           comprising:

4           a current transformer having at least a primary  
5           winding and a secondary winding, the primary  
6           winding coupling to the AC device and the AC  
7           device transmitting the AC current to the  
8           primary winding, such that the secondary  
9           winding generating an induced current; and

10          an induced impedance, connected with the secondary  
11          winding in parallel, for generating an induced  
12          voltage according to the induced current,  
13          wherein the load is connected with the induced  
14          impedance in parallel.

1           2.    The driving circuit as claimed in claim 1,  
2           wherein a coil number of the primary winding is smaller  
3           than a coil number of the secondary winding.

1           3.    The driving circuit as claimed in claim 1,  
2           wherein the induced impedance is a resistor.

1           4.    The driving circuit as claimed in claim 1  
2           further comprising a low-pass filter connected with the  
3           secondary winding in parallel.

1           5.    The driving circuit as claimed in claim 1,  
2           wherein the load is an illumination device.

1           6.    The driving circuit as claimed in claim 5,  
2           wherein the illumination device is an electroluminescent  
3           lamp.

1           7.    An electronic device having an illumination  
2           circuit, comprising:

3           a first load, wherein a current flowing on the first  
4           load is reduced as time increased;

5           an AC driving unit for generating an AC current to  
6           drive the first load;

7           a current transformer having a primary winding and a  
8           secondary winding, wherein the primary winding  
9           is coupled between the first load and the AC  
10          driving unit, such that the secondary winding  
11          generates an induced current;

12          a second load having an illumination function,  
13          wherein brightness of the second load is  
14          changed according to an AC driving voltage and  
15          wherein the brightness of the second load  
16          corresponds to an operating duration of the  
17          first load; and

18          a transformation device, connected with the  
19          secondary winding and the second load in  
20          parallel, for transforming the induced current  
21          to the AC driving voltage to drive the second  
22          load.

1           8.    The electronic device as claimed in Claim 7,  
2           wherein a coil number of the primary winding is smaller  
3           than a coil number of the secondary winding.

1           9.    The electronic device as claimed in claim 7,  
2    wherein the transformation device comprises an impedance.

1           10.   The electronic device as claimed in claim 9,  
2    wherein the transformation device further comprises a  
3    low-pass filter.

1           11.   The electronic device as claimed in claim 7,  
2    wherein the electronic device is a video projector.

1           12.   The electronic device as claimed in claim 7,  
2    wherein the first load is an AC lamp.

1           13.   The electronic device as claimed in claim 7,  
2    wherein the second load is an electroluminescent lamp.

1           14.   An electronic device having an illumination  
2    circuit, comprising:

3           a first load;

4           an AC driving unit for generating an AC current to  
5           drive the first load;

6           a current transformer having a primary winding and a  
7           secondary winding, wherein the primary winding  
8           is connected with the first load in parallel  
9           and coupled to the AC driving unit such that  
10          the secondary winding generates an induced  
11          current;

12          a second load having an illumination function; and

13          a transformation device coupled to the secondary  
14          winding and second load for transforming the  
15          induced current to the AC driving voltage to  
16          drive the second load.

1           15. The electronic device as claimed in claim 14,  
2 wherein a current flowing on the first load becomes  
3 smaller and brightness of the second load is reduced over  
4 time.

1           16. The electronic device as claimed in claim 14,  
2 wherein the electronic device is a video projector.

1           17. The electronic device as claimed in claim 14,  
2 wherein the first load is an AC lamp.

1           18. The electronic device as claimed in claim 14,  
2 wherein the second load is an electroluminescent lamp.

1           19. The electronic device as claimed in claim 14,  
2 wherein a coil number of the primary winding is smaller  
3 than a coil number of the secondary winding.